In the Claims:

Please amend the claims pursuant to 37 CFR 1.121 as follows. In addition, please cancel claim 28, without prejudice.

Claims 1 and 2 (cancelled).

Claim 3 (currently amended): A method for detecting the multi-fluorescence ~~detection~~ of fluorophores, comprising the steps of

~~-by means of a simultaneous measurement of the decay time of the fluorescences where, for the differentiation between at least two fluorophores in addition to their spectral characteristics, the decay behaviour of the fluorescence processes is examined by the displacement of electronic gates in the nanosecond range along a timing axis.~~

detecting the multi-fluorescence in the sub-nanosecond to millisecond time range,

supplying to an objects of examination the excitation wave lengths for the individual fluorophores, delayed through an optical delay in the range of sub-nanoseconds to some milliseconds, so that the fluorescences is able to be

excited and detected one after the other.

Claim 4 (currently amended): The method according to Claim 3, wherein the optical delay ~~is formed by light wave conductors.~~ corresponds to the life duration of the individual fluorescence material.

Claim 5 (currently amended): The method according to Claim 3, ~~wherein the electronic time gate is positioned in the maximum of the timing pattern of the life duration of the fluorescence signal, in order to selectively detect fast decaying fluorescence processes~~ wherein for the differentiation between at least two fluorophores in addition to their spectral characteristics, the decay behavior of the fluorescence processes is examined by the displacement of electronic gates in the nanosecond range along a timing axis.

Claim 6 (previously amended): The method according to Claim 3, wherein the electronic time gate is positioned in the fade-out of the timing pattern of the life duration of the fluorescence signal, in order to selectively detect slow decaying fluorescence processes.

Claim 7 (currently amended): The method according to Claim 3, wherein several different fluorescence ~~colouring~~ coloring materials are detected in the liquid chromatography.

Claim 8 (currently amended): The method according to Claim 3, wherein fluorescence ~~colouring~~ coloring materials are detected in multi-well plates.

Claim 9 (previously amended): The method according to Claim 3, wherein a multiple fluorescence detection is carried out on living/dead tissue.

Claim 10 (currently amended): The method according to Claim 3, wherein a multi fluorescence detection is carried out on a planar~~, particular, fibrillar~~ carriers ~~such as DNA-/protein chip~~.

Claim 11 (currently amended): The method according to Claim 3, wherein the method is image-rendering and ~~the detector~~ is detected by a camera.

Claim 12 (previously amended): The method according to Claim 3, wherein a multiple fluorescence detection and an end-point determination is carried out during the PCR, particularly quantitative and multiplex PCR.

Claim 13 (currently amended): The method according to Claim 3, wherein several fluorescence ~~colouring~~ coloring materials are detected in electrophoresis gels, electrophoresis capillaries and electrophoresis blots.

Claim 14 (currently amended): A method for detecting the multi-fluorescence ~~detection~~ of fluorophores, comprising the steps of ~~by means of a simultaneous measurement of~~

measuring the decay time of the fluorescences, where the excitation wave lengths for the individual fluorophores, delayed through an optical delay (4) in the range of sub-nanoseconds to some milliseconds, are ~~conducted to the~~ supplied to an objects of examination ~~(7)~~ so that the fluorescences ~~can be~~ is capable of being ~~excitated~~ excited and detected one after the other.

Claim 15 (previously added): The method according to claim 14, wherein for the differentiation between at least two fluorophores in addition to their spectral characteristics, the decay ~~behaviour~~ behavior of the fluorescence processes is examined by the displacement of electronic gates in the nanosecond range along a timing axis.

Claim 16 (previously added): The method according to Claim 14, wherein the delay ~~(4)~~ is formed by light wave conductors.

Claim 17 (previously added): The method according to Claim 14, wherein the electronic time gate is positioned in the maximum of the timing pattern of the life duration of the fluorescence signal, in order to selectively detect fast decaying fluorescence processes.

Claim 18 (previously added): The method according to Claim 14, wherein the electronic time gate is positioned in the fade-out of the timing pattern of the life duration of the fluorescence signal, in order to selectively detect slow decaying fluorescence processes.

Claim 19 (currently amended): The method according to the Claim 14, wherein several different fluorescence ~~colouring~~ coloring materials are detected in the liquid chromatography.

Claim 20 (currently amended): The method according to the Claim 14, wherein fluorescence ~~colouring~~ coloring materials are detected in multi-well plates.

Claim 21 (previously added): The method according to the Claim 14, wherein a multiple fluorescence detection is carried out on living/dead tissue.

Claim 22 (currently amended): The method according to the Claim 14, wherein a multi fluorescence detection is carried out on a planar~~, particular, fibrillar~~ carrier~~s such as DNA-/protein-chip~~.

Claim 23 (canceled)

Claim 24 (previously added): The method according to the Claim 14, wherein a multiple fluorescence detection and an end-point determination is carried out during the PCR, particularly quantitative and multiplex PCR.

Claim 25 (currently amended): The method according to the Claim 14, wherein several fluorescence ~~colouring~~ coloring materials are detected in electrophoresis gels, electrophoresis capillaries and electrophoresis blots.

Claim 26 (new): The method according to Claim 10, wherein the planar carrier is a fibrillar DNA-/protein-chip.

Claim 27 (new): The method according to the Claim 22, wherein the planar carrier is a fibrillar DNA-/protein-chip.